

**CLAIMS**

- 1 Use of a Ble fusion protein as an expression and folding marker and/ or an affinity tag.
2. Use of a Ble fusion protein as claimed in claim 1 as an expression and folding marker.
3. Use of a Ble fusion protein as claimed in claim 1 as an affinity tag.
4. Use of a Ble fusion protein as claimed in claim 1 as an expression and folding marker and an affinity tag.
5. Use of a Ble fusion protein as claimed in any of the preceding claims wherein the Ble fusion protein is the expression product of a Sh ble, Tn5 ble or Sa ble gene.
6. A method of immobilising a protein to a surface, wherein the protein is provided to the surface as a ble fusion protein and the surface is a surface derivatised with an antibiotic from the bleomycin family.
7. A method as claimed in claim 6 wherein the antibiotic from the bleomycin family is selected from the group consisting of bleomycin, phleomycin, tallysomylin, pepleomycin and Zeocin™.
8. A method as claimed in claim 7 wherein the antibiotic from the bleomycin family is selected from the group consisting of bleomycin A2, bleomycin A5, bleomycin A6, bleomycin B2 or Zeocin™.
9. A method as claimed in any of claims 6-8 wherein a functional group on the antibiotic is used to link it to the surface.
10. A method as claimed in claim 9 wherein an amine group present on the antibiotic is used to couple the antibiotic to the surface.
11. A method as claimed in claim 10 wherein the antibiotic is coupled to a polyethyleneglycol (PEG) derivitized surface via an amine group.
12. A method as claimed in any of claims 6 to 11 wherein the surface is the surface of an array, a microtitre plate, a slide or a bead.
13. A method as claimed in claim 12 wherein the array is a microarray.
14. A method as claimed in claim 13 wherein the array is a MALDI array.

15. A method as claimed in claim 12 which further comprises removing the ble fusion protein from the surface.
16. A probe, characterized in that it has a target surface comprising an array having a plurality of discrete target areas presenting one or more analyte capture moieties comprising an antibiotic from the bleomycin family.
17. A probe as claimed in claim 16 wherein the antibiotic is provided on the target surface at a high surface density.
18. A probe as claimed in claim 17 wherein the capture moieties have an affinity for the moiety they are intended to capture in the order of 100nM.
19. A probe as claimed in any of claims 16-18 wherein the antibiotic from the bleomycin family is selected from the group consisting of bleomycin, phleomycin, tallysomycin, pepleomycin and Zeocin<sup>TM</sup>.
20. A probe as claimed in claims 19 wherein the antibiotic from the bleomycin family is selected from the group consisting of bleomycin A2, bleomycin A5, bleomycin A6, bleomycin B2 or Zeocin<sup>TM</sup>.
21. A purification media having a large surface to volume area comprising a target surface presenting one or more analyte capture moieties comprising an antibiotic from the bleomycin family.
22. A purification media as claimed in claim 21 which is a bead.
23. A purification media as claimed in claim 21 or 22 wherein the antibiotic is provided on the target surface at a low surface density.
24. A purification media as claimed in claim 23 wherein the capture moieties have an affinity for the moiety they are intended to capture in the order of 600nM.
25. A purification media as claimed in any of claims 21 - 24 wherein the antibiotic from the bleomycin family is selected from the group consisting of bleomycin, phleomycin, tallysomycin, pepleomycin and Zeocin<sup>TM</sup>.
26. A purification media as claimed in any of claims 21 - 25 wherein the antibiotic from the bleomycin family is selected from the group consisting of bleomycin A2, bleomycin A5, bleomycin A6, bleomycin B2 or Zeocin<sup>TM</sup>.

27. A purification media as claimed in any of claims 21-26 wherein the antibiotic is bound to the surface via a flexible linker molecule.
28. A purification media as claimed in claim 27 wherein the flexible linker molecule is a polyethylene glycol (PEG).
29. An antibiotic from the bleomycin family characterised in that it is tagged with a marker.
30. An antibiotic as claimed in claim 29 wherein the marker is a visual marker.
31. An antibiotic as claimed in claim 30 wherein the visual marker is a fluorescent marker.
32. An antibiotic as claimed in claim 31 wherein the fluorescent marker is selected from NHS-activated fluorescein, Cy3, Cy5 or Rhodamine.
33. A method for generating soluble forms of an insoluble protein comprising:
- i) generating a library of protein variants; and
  - ii) selecting colonies for the presence of a soluble protein by expressing the protein as a ble fusion protein and selecting on an antibiotic from the bleomycin family.
34. A method as claimed in claim 33 further comprising growing the selected colonies, lysing them and binding the fusion protein to a surface.
35. A method as claimed in claim 34 wherein the surface comprises an antibiotic from the bleomycin family via which the fusion protein is bound.
36. A method of purifying a ble fusion protein from a crude extract comprising the step of immobilising it on a surface via an antibiotic from the bleomycin family and optionally releasing it there from.
37. A method of identifying the cellular localisation of a protein comprising
- i) expressing the protein as a ble fusion protein in a cell,
  - ii) introducing a labelled antibiotic from the bleomycin family into the cell, and
  - iii) detecting the labelled antibiotic.
38. A method as claimed in claim 37 wherein the antibiotic is one as claimed in any of claims 29-32.

39. A kit for the production of an array comprising a ble vector and a surface derivatised with an antibiotic from the bleomycin family or the components for making said derivatised surface.